## REMARKS

The foregoing amendments are made to place the specification in better form in accordance with US Patent and Trademark Office practice. The applicants submit that no new matter has been added.

In accordance with the provisions of 37 C.F.R. 1.21, attached to this paper is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made" (Attachment A hereto).

Applicants request approval of the drawing changes indicated on the attached copies of FIGs. 11-39 (Attachment B hereto). Applicants' proposed changes, which are indicated in red, relate to substituting reference letters to clarify the flowcharts of methods 1200, 1400, and 1700 and to renumbering of the drawings. No new matter has been added to the drawings. Corrected formal drawings will be filed in this application.

In view of the foregoing remarks, the prompt issuance of a notice of allowance is respectfully solicited. The examiner is cordially invited to contact the Applicants' undersigned attorney with any questions regarding this paper or the application as a whole.



Respectfully submitted,

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please replace the paragraph beginning at page 4, line 16, with the following rewritten paragraph:

-- [FIG. 10 is a flowchart] FIGs. 10-12 are flowcharts illustrating a method of creating a communication link between a source device and a destination device via the self-positioning wireless transceiver system in accordance with the principles of the present invention.--

Please replace the paragraph beginning at page 4, line 19, with the following rewritten paragraph:

-- [FIG. 11 is a] FIGs. 13-17 are block diagram [representation] representations of examples of positions of self-positioning transceivers following the execution of various steps of the method of [FIG. 10] FIGs. 10-12.--

Please replace the paragraph beginning at page 4, line 22, with the following rewritten paragraph:

-- [FIG. 12 is a flowchart] FIGs. 18 and 19 are flowcharts illustrating a method of maintaining a quality communication link between the source device and the destination device as the source device moves away relative to the destination device in accordance with the principles of the present invention.--

Please replace the paragraph beginning at page 5, line 3, with the following rewritten paragraph:

-- [FIG. 13 is a] FIGs. 20-24 are block diagram [representation] representations of examples of positions of self-positioning transceivers following the execution of various steps of the method of [FIG. 12] FIGs. 18 and 19.--

Please replace the paragraph beginning at page 5, line 6, with the following rewritten paragraph:

-- [FIG. 14 is a flowchart] FIGs. 25 and 26 are flowcharts illustrating a method of accommodating the movement of a source device towards a destination device in accordance with the principles of the present invention.--

Please replace the paragraph beginning at page 5, line 9, with the following rewritten paragraph:

-- [FIG. 15 is a] FIGs. 27-30 are block diagram [representation] representations of examples of relative positions of self-positioning transceivers, a source device and a destination device at various steps of the method of [FIG.14] FIGs. 25 and 26.--

Please replace the paragraph beginning at page 5, line 12, with the following rewritten paragraph:

-- [FIG. 16 is a] FIGs. 31 and 32 are block diagram [representation] representations of a crossover configuration and of a shorter communication link created in response to the detection of the crossover configuration in accordance with the principles of the present invention.--

Please replace the paragraph beginning at page 5, line 15, with the following rewritten paragraph:

-- [FIG. 17 is a flowchart] FIGs. 33 and 34 are flowcharts illustrating a method of retrieving deployed self-positioning transceivers in accordance with the principles of the present invention.--

Please replace the paragraph beginning at page 5, line 17, with the following rewritten paragraph:

-- FIG. [18] 35 is a flowchart illustrating an alternate method of retrieving deployed self-positioning transceivers in accordance with the principles of the present invention.--



Please replace the paragraph beginning at page 5, line 19, with the following rewritten paragraph:

-- [FIG. 19 is a] FIGs. 36-39 are block diagram [representation] representations of examples of relative positions of self-positioning transceivers, a source device and a destination device at various steps of the method of FIG. [18] 35.--

Please replace the paragraph beginning at page 19, line 12, with the following rewritten paragraph:

-- Referring to [FIG. 10] FIGs. 10-12, a method 1000 of creating a communication link between a source device 102 and a destination device 104 via the self-positioning wireless transceiver system 100 is shown. Examples of positions of the self-positioning transceivers at various stages of the method 1000 are illustrated in [FIG. 11] FIGs. 13-17. The described method 1000 may be used to maintain a weakening communication link between a source device 102, such as cellular telephone, and a wireless cellular

communication system via a destination device 104, such as a BTS, as the cellular telephone is moving out of range of the wireless cellular communication system (shown in FIG. [11a] 13).--

Please replace the paragraph beginning at page 20, line 7, with the following rewritten paragraph:

-- Once the self-positioning wireless transceiver system 100 has been deployed, the lead self-positioning transceiver T1 positions itself within communication range of the source device 102 at step 1008 and establishes a communication link with the source device 102 at step 1010 (shown in FIG. [11b] 14). At step 1012, the lead self-positioning transceiver T1 determines whether it is within range to receive signals that are greater than a primary pre-defined threshold from the destination device 104. Given the limited lower power transmission capabilities of the self-positioning transceivers T1, the primary pre-defined threshold is generally determined to identify when the lead self-positioning transceiver T1 in within communication range to transmit signals received from the source device 102 to the destination device 104. It should be noted that alternative methods of detecting when the lead self-positioning transceiver T1 is within communication range to both receive destination device signals and transmit signals that are capable of being received by the destination device 104 are also considered to be within the scope of the invention.--

Please replace the paragraph beginning at page 22, line 1, with the following rewritten paragraph:

-- If additional self-positioning transceivers T are available, the lead self-positioning transceiver issues a request for additional self-positioning transceiver support at step 1014. At step 1016, a self-positioning transceiver T2 responds to the issued request by positioning

itself within communication range of the source device 102 and within communication range of the self-positioning transceiver T1 having a direct communication link to source device 102. The newly positioned self-positioning transceiver T2 then establishes a communication link with the source device 102 and with the self-positioning transceiver T1 having a direct communication link with the source device 102 at step 1018 (shown in FIG. [11c] 15).--

Please replace the paragraph beginning at page 22, line 10, with the following rewritten paragraph:

-- At step 1020, the lead self-positioning transceiver T1 repositions itself a predefined incremental distance away from the source device 102 and towards the destination device 104 in a specific direction based on directional information derived from sensed destination device 104 signals. Then at step 1022, each of the individual self-positioning transceivers T2 involved in creation of the communication link between the source device 102 and the lead self-positioning transceiver T1, thus far, reposition themselves with respect to neighboring self-positioning transceivers T1 to optimize aggregate communication link quality between the source device 102 and the lead self-positioning transceiver T1 (shown in FIG. [11d] 16).--

Please replace the paragraph beginning at page 22, line 19, with the following rewritten paragraph:

-- Step 1012 is then repeated to determine whether the lead-positioning transceiver T1 is within communication range to both receive signals from and transmit signals to the destination device 104. If the lead self-positioning transceiver T1 is within communication range of the destination device 104, a strengthened communication link is established between the source device 102 and the destination device 104 and the method returns to the monitoring step 1002. Otherwise, steps 1014 through 1022 are repeated and additional self-

positioning transceivers T3, T4 added until a sufficiently strengthened communication link is established between the source device 102 and the destination device 104 (shown in FIG. [11e] 17).--

Please replace the paragraph beginning at page 23, line 14, with the following rewritten paragraph:

-- Referring to [FIG. 12] FIGs. 18 and 19, a method 1200 of maintaining a quality communication link between the source device 102 and the destination device 104 as the source device 102 moves away relative to the destination device 104, is shown. [FIG. 13 illustrates] FIGs. 20-24 illustrate the relative positions of the self-positioning transceivers T1-T4, the source device 102 and the destination device 104 at different steps of the method 1200. The method 1200 begins at step 1202 with the self-positioning transceiver T3 having a direct communication link to the source device 102 determining whether a received signal from the source device 102 is below a predefined threshold. If the received signal from the source device 102 is greater than the predefined threshold, the self-positioning transceiver T3 maintains its position at step 1204 (shown in FIG. [13a] 20). If the received signal is determined to be less than the predefined threshold, at step 1206, the self-positioning transceiver T3, directly communicatively linked to the source device 102, moves with the source device 102 to remain within communication range of the source device 102 (shown in FIG. [13b] 21). At step 1208, the self-positioning transceivers T1, T2 communicatively linking the destination device 104 to the self-positioning transceiver T3, with a direct communication link to the source device 102, reposition themselves with respect to neighboring self-positioning transceivers T1, T2 in an attempt to optimize the quality of the aggregate communication link between the source device 102 and the destination device 104 (shown in FIG. [13c] 22).--

Please replace the paragraph beginning at page 25, line 12, with the following rewritten paragraph:

-- If additional self-positioning transceivers T are available, a request is issued for additional self-positioning transceiver support at step 1214. Responsive to the issued request, a self-positioning transceiver T4 repositions itself and establishes communication links with at least one of the self-positioning transceivers T4 within the established communication link at step 1216 (shown in FIG. [13d] 23). The self-positioning transceivers T1-T4 within the extended communication link reposition themselves with respect to each other to optimize the aggregate quality of the signals exchanged between the source device 102 and the destination device 104 at step 1208 (shown in FIG. [13e] 24). Steps 1208 through 1216 are repeated until a communication link of sufficient quality is established between the source device 102 and the destination device 104.--

Please replace the paragraph beginning at page 25, line 22, with the following rewritten paragraph:

-- On the other hand, if for example, the source device 102 moves in a direction towards the destination device 104, the length of the communication link may need to be contracted to eliminate the use of unnecessary self-positioning transceivers T within the communication link. Referring to [FIG. 14] FIGs. 25 and 26, a method 1400 of accommodating the movement of a source device 102 towards a destination device 104 is shown. [FIG. 15 illustrates] FIGs. 27-30 illustrate the relative positions of the self-positioning transceivers T1-T4, the source device 102 and the destination device 104 at different steps of the method 1400.--

Please replace the paragraph beginning at page 26, line 6, with the following rewritten paragraph:

-- At step 1402, the self-positioning transceiver T4 closest to the source device 102 determines whether the source device 102 has moved relatively closer to the destination device 104 based whether the quality of the source device signal received by the self-positioning transceiver T4 is greater than a predefined threshold. If the quality of the received source signal is below the predefined quality threshold, the self-positioning transceivers maintain their individual positions at step 1404 (shown in FIG. [15a] 27). If the self-positioning transceiver T4 detects a movement of the source device 102 towards the destination device 104, at step 1406, all of the self-positioning transceivers T1-T4 within the established communication link reposition themselves with respect to neighboring self-positioning transceivers T1-T4 in an attempt to ensure that a somewhat uniform quality of signals are exchanged between neighboring self-positioning transceivers T1-T4 (shown in FIG. [15b] 28). The self-positioning transceiver repositioning process generally seeks to optimize the aggregate quality of the signals transmitted between the source device 102 and the destination device 104.--

Please replace the paragraph beginning at page 26, line 20, with the following rewritten paragraph:

--The quality of the signals exchanged via individual communication links by neighboring self-positioning transceivers T1-T4 are checked to determine if the quality of signals exchanged between neighboring self-positioning transceivers exceeds a predefined threshold at step 1408. If the quality of the exchanged signals falls below the predefined threshold, the repositioned self-positioning transceivers T1-T4 maintain their positions at step 1410. If however, the quality of the exchanged signals exceeds the predefined threshold, at

step 1411, the self-positioning transceiver T4 that is directly communicatively coupled to the source device 102 is identified and the self-positioning transceiver T3 directly communicatively coupled to the previously identified self-positioning transceiver T4 is also identified. A command is issued to the identified self-positioning transceiver T3 to establish communicatively coupling with the source device 102. If necessary, the self-positioning transceiver T3 repositions itself closer to the source device 102 to establish such coupling. A command is issued to the self-positioning transceiver T4 having a direct communication link to the source device 102 to withdraw from the communication link at step 1412. At step 1414, the self-positioning transceiver T4, having a direct communication link to the source device 102, withdraws from the communication link and (shown in FIG. [15c] 29), and at step 1416, the remaining self-positioning transceivers T1-T3 reposition themselves with respect to each other such that each of the self-positioning transceivers T1-T3 receives and transmits signals of somewhat uniform quality (shown in FIG. [15d] 30).--

Please replace the paragraph beginning at page 28, line 15, with the following rewritten paragraph:

-- In one embodiment of the invention, the self-positioning wireless transceiver system 100 can detect when the path of the movement of the source device 102 with respect to the destination device 104 causes the communicatively linked self-positioning transceivers T1-T10 to create a crossover configuration, an example of which is shown in FIG. [16a] 31. Continuous communications between the self-positioning transceivers T1-T10 permits both the detection and the elimination of the crossover configuration. For example, the self-positioning transceivers T2, T3 do not normally expect to be within direct communication range of self-positioning transceivers T8, T9 when the self-positioning transceivers T2, T3, T8, T9 are all within the same communication link, thereby indicating to the self-positioning

wireless transceiver system 100 that a crossover configuration has been created. In response to the detection of the crossover configuration, the self-positioning wireless transceiver system 100 reconfigures itself, as shown in FIG. [16b] 32, to create a shorter and relatively more efficient communication link comprising a reduced number of self-positioning transceivers T1, T2, T9, T10. The remaining self-positioning transceivers T3-T8 simply remove themselves from the communication link.--

Please replace the paragraph beginning at page 30, line 3, with the following rewritten paragraph:

-- Referring to [FIG. 17] FIGs. 33 and 34, a method 1700 of retrieving deployed self-positioning transceivers T is described. The method 1700 begins at step 1702 with a determination of whether the self-positioning transceivers T detected the need to form a communication link during a predefined period of downtime. If the predetermined period of downtime has not yet elapsed, the self-positioning transceivers T hold their respective positions. If the self-positioning transceivers T have not been required to form a communication link for the predefined period of downtime, the self-positioning transceivers T initiate a search to locate a" homing signal" transmitted via the control channel at step 1704. The self-positioning wireless transceiver system 100 then determines whether the "homing" signal has been detected at step 1706. If the "homing signal" is detected by at least one of the self-positioning transceivers T at step 1706, data parameters associated with location and direction of the "homing signal" is communicated to the other self-positioning transceivers T at step 1708. At step 1710 the self-positioning transceivers T follow the "homing signal" to the "home" location.--

Please replace the paragraph beginning at page 31, line 11, with the following rewritten paragraph:

-- In an alternative embodiment, when a communication link between a source device 102 and a destination device 104 is terminated, the plurality of communicatively linked self-positioning transceivers T1-T3 can be retrieved by "pulling" the communicatively linked self-positioning transceivers T1-T3 back to the location of the source device 102. Referring to [FIG 18] FIG. 35, the method 1800 of retrieving deployed self-positioning transceivers T1-T3 by "pulling" them in is shown. [FIG. 19 illustrates] FIGs. 36-39 illustrate the relative positions of the self-positioning transceivers T1-T3, the source device 102 and the destination device 104 at various stage of the method 1800.--

Please replace the paragraph beginning at page 31, line 19, with the following rewritten paragraph:

-- The method 1800 begins at step 1802 with a determination of whether a previously established communication link between the source device 102 and the destination device 104 has been terminated. (The positions of the self-positioning transceivers T1-T3 creating the communication link between the source device 102 and the destination device 104 are shown in FIG. [19(a)] 36) If the communication link is detected as terminated, a retrieval command is issued to the self-positioning transceivers T1-T3 at step 1804. Upon receiving the retrieval command, at step 1806, the self-positioning transceivers T1-T3 move closer together with respect to neighboring self-positioning transceivers T1-T3 (shown in FIG. [19(b)] 37) and the source device 102 such that the self-positioning transceiver T2 adjacent the self-positioning transceiver T3 in direct communication with the source device 102 can easily establish a direct communication link with the source device 102. At step 1808, each self-positioning transceiver T1-T3 determines if it is in communication with the source

device 102 via a direct communication link. The self-positioning transceiver T2, T3 not in direct communication with the source device 102 maintain their positions at step 1810. At step 1812, the self-positioning transceiver T2 adjacent the self-positioning transceiver T3 in direct communication with the source device 102 establishes a direct communication link with the source device 102 and at step 1814, the self-positioning transceiver T3 that was initially in direct communication with the source device 102 terminates communicative coupling with the source device 102 and is retrieved (shown in FIG. [19(c)] 38). The method 1800 then returns to step 1806 where the remaining self-positioning transceivers T1, T2 move closer together and the self-positioning transceivers T1, T2 operate to identify the self-positioning transceiver with a direct link to the source device at step 1808. Steps 1810-1814 are repeated again to retrieve the next self-positioning transceiver T2 (shown in FIG. [19(d)] 39). Steps 1806-1814 are repeated until all of the self-positioning transceivers T are retrieved.--